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EXAMINER

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ART UNIT	PAPER NUMBER
2619	4

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DATE MAILED: 05/02/96

This is a communication from the examiner in charge of your application.
COMMISSIONER OF PATENTS AND TRADEMARKS

☑ This application has been examined ☑ Responsive to communication filed on 3-7-96 ☐ This action is made final.

A shortened statutory period for response to this action is set to expire 3 month(s), ____ days from the date of this letter.
Failure to respond within the period for response will cause the application to become abandoned. 35 U.S.C. 133

Part I THE FOLLOWING ATTACHMENT(S) ARE PART OF THIS ACTION:

1. ☐ Notice of References Cited by Examiner, PTO-892.
2. ☑ Notice of Draftsman's Patent Drawing Review, PTO-948.
3. ☐ Notice of Art Cited by Applicant, PTO-1449.
4. ☐ Notice of Informal Patent Application, PTO-152.
5. ☐ Information on How to Effect Drawing Changes, PTO-1474.
6. ☐ _____.

Part II SUMMARY OF ACTION

1. ☑ Claims 3-7 are pending in the application.

   Of the above, claims _____ are withdrawn from consideration.

2. ☐ Claims _____ have been cancelled.

3. ☐ Claims _____ are allowed.

4. ☑ Claims 3-7 are rejected.

5. ☐ Claims _____ are objected to.

6. ☐ Claims _____ are subject to restriction or election requirement.

7. ☐ This application has been filed with informal drawings under 37 C.F.R. 1.85 which are acceptable for examination purposes.

8. ☐ Formal drawings are required in response to this Office action.

9. ☐ The corrected or substitute drawings have been received on _____. Under 37 C.F.R. 1.84 these drawings are ☐ acceptable; ☐ not acceptable (see explanation or Notice of Draftsman's Patent Drawing Review, PTO-948).

10. ☐ The proposed additional or substitute sheet(s) of drawings, filed on _____. has (have) been ☐ approved by the examiner; ☐ disapproved by the examiner (see explanation).

11. ☐ The proposed drawing correction, filed _____, has been ☐ approved; ☐ disapproved (see explanation).

12. ☐ Acknowledgement is made of the claim for priority under 35 U.S.C. 119. The certified copy has ☐ been received ☐ not been received ☐ been filed in parent application, serial no. _____ ; filed on _____.

13. ☐ Since this application apppears to be in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under Ex parte Quayle, 1935 C.D. 11; 453 O.G. 213.

14. ☐ Other

EXAMINER'S ACTION

1. This Office action is responsive to the amendment filed 11/1/96. As directed by the amendments, claims 3-7 were amended and new claims 8-34 were added. Thus, claims 3-34 are presently pending in this application (claims 1-2 were previously canceled).

2. There are three types of double patenting rejections:

a) Statutory double patenting rejection under 35 U.S.C. 101,

b) Nonstatutory obvious type double patenting,

c) Nonstatutory non-obviousness type double patenting.

In this action, the rejections of the third type that are directed to the claims of the parent patented files will have two different versions. The first rejects the claims because they have not been established to be independent and distinct from the patented claims. The second version includes that premise, and further supports the rejection by establishing that representative claims from this application have common subject matter with representative ones of the patented claims.

3. Claims 3-34 (all of the claims in this application) are rejected under the judicially created doctrine of non-obviousness non-statutory double patenting over the patented claims in U.S. Patents 4,694,490; 4,704,725; 4,965,825; and 5,109,414 since the claims, if allowed, would improperly extend the "right to exclude" already granted in those patents.

The subject matter claimed in the instant application is fully disclosed in the patents and is covered by the patents since the patents and the application are claiming common subject matter,

as follows: a signal processing apparatus and method including an interactive communications system apparatus and method. Furthermore, there is no apparent reason why applicants were prevented from presenting claims corresponding to those of the instant application during prosecution of the parent applications which matured into patents. *In re Schneller*, 397 F.2d 350, 158 USPQ 210 (CCPA 1968). See also MPEP § 804.

A review of the claims in each of the four parent patents (5,109,414; 4,964,825; 4,704,725; 4,694,490) was made. These patented claims do not appear "independent and distinct" from the claims in this application. The present claims are directed to a method and apparatus for controlling communications including television communications or programming. The claims in patent 5,109,414 were directed to a processing system and method for signal distribution including television. The claims in patent 4,965,825 were directed to a system and process for signal processing including carrier communications. The claims in patent 4,704,725 were directed to a method of communicating data to receiver stations. The claims in patent 4,694,490 were directed to a method for communicating and processing television programs.

Applicants' invention can be envisioned at in three parts. As with most cable TV systems, there is a head end station which generates the video programming. Applicants have included an intermediate station which receives transmissions, from the head end or subscriber stations, and distributes the programming to each subscriber. The subscriber station receives the programming, and can communicate to the intermediate station with requests or instructions. Even if the claims directed to each station were "independent and distinct" from the claims directed to the other

stations, there would be no reason to "restrict" between the three stations since their overall function is so interrelated that the stations have the same search area, i.e the PTO could not establish a burden if required to search for all three stations.

It is believed that CCPA in *Schneller* used the "independent and distinct" standard as the main factor in its determination that the double patenting rejection should be affirmed. The CCPA stated that the fundamental reason supporting the principle of non-statutory double patenting rejections is to prevent unjustified timewise extension of the right to exclude granted by a patent no matter how the extension is brought about. Further the CCPA stated at 158 USPQ 210 (214):

> "... To conform to this reason and to prevail here, appellant has the burden of establishing that the invention in his patent is "independent and distinct" from the invention of the appealed claims. The public policy considerations underlying 35 U.S.C. 121 permit separate patents on "independent and distinct" inventions which are initially "claimed in one application." The statute places initial responsibility for this determination on the Commissioner of Patents. Where, as here, no such determination has been made, it is necessary to scrutinize carefully an applicant's voluntary alleged determination of this issue for it can lead to the improper proliferation of patents on the same invention with the inherent result of extending timewise a patentee's right to exclude others from the invention disclosed in the original application and on which his patent has issued."

The CCPA further stated at page 215 the length of time between an earlier patent and a later filed application should be considered. The filing date of this application was over seven years after the first patent issued (serial number 06/317,510, filed November 3, 1981, patented as 4,694,490 on September 15, 1987) and over four years after the first CIP issued as a patent (serial number 07/096,096, filed September 11, 1987, patented as 4,965,825 on October 23, 1990).

To the extent that one would view *Schneller* and *In re Kaplan*, 789 F.2d 1574, 229 USPQ 678 (Fed. Cir. 1986) to be in conflict, it is clear that *Schneller* is the controlling precedent to the factual situation here. In *Schneller*, the Court specifically distinguished a situation of the same applicant from one where the application and patent had different inventive entities. In *Kaplan*, the inventive entities between the patent and application were different, as was required at the time of the Kaplan invention, since Kaplan's filing date was before the Patent Law Amendments Act of 1984. In this present case, as with *Schneller*, the inventive entities of the application and patent are the same. Clearly, Kaplan was required, or entitled, to file separate applications, whereas applicants and Schneller did not have reason to do so. Finally, decisions of a three-judge panel of the Federal Circuit cannot overturn prior precedential decisions of the CCPA. See *UMC Elec. Co. v. United States* 2 USPQ2d 1465.

4. Claims 3-34 (all of the claims in this application) are rejected under the judicially created doctrine of non-obviousness non-statutory double patenting over the patented claims in U.S. Patents 4,694,490; 4,704,725; 4,965,825; and 5,109,414 since the claims, if allowed, would improperly extend the "right to exclude" already granted in those patents.

This rejection incorporates the rejection above. That double patenting rejection is further supported by *Schneller* because the great majority of the patented claims are "comprising" type

claims.[1] While it is recognized that the specific claim limitations in the application may not have been claimed in the patents, this alone does not establish grounds for overcoming this rejection. The patent claims were directed to parts of applicants' total disclosed system or process. Therefore the recitation of "comprising" enables those patented claims to "cover" claim features now recited by applicants' present application claims.

Since the head end, intermediate, and subscriber stations are part of the overall system, claims to one part "cover" the other part(s) under the *Schneller* decision (page 215), since the preferred embodiment would include all three parts of the main system, i.e. head, intermediate, and subscriber stations. For example, claims to the subscriber station still cover the intermediate station because the subscriber station would be processing information that had to come from the intermediate station. A second example would be that claims to one aspect or function of the intermediate station would cover the invention of another aspect or function of the intermediate station since both functions could be performed with the other. Applicants' disclosed system includes similar features in the head, intermediate, and subscriber stations. For example, the stations can transmit and receive, and have computer, processor and controller capabilities. For that reason, the disclosure will permit broadly drafted claims to read on either the head, intermediate, or subscriber station. Patent claims that recite receiving and transmitting can cover both intermediate and subscriber stations. The fact that patent claims and application claims are

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[1]The claims that recite neither "comprising" nor "consisting" are considered to recite open claim language, i.e. equivalent to "comprising". See, for example, claim 1 of Patent 5,109,414.

directed to different elements does not prohibit this rejection if there is common or interrelated subject matter recited. The Court in *Schneller* stated at page 215:

> "... They "cover" the preferred form ABCXY, common to the patent and this application, in the same sense. The fact that X and Y are distinct elements, performing, independent functions, so that either can be employed without the other, does not change this fact. Neither does appellant's omission of reference to the lip Y from his patent claims."

Application claim 6 is a representative claim. It is directed to a method of delivering programs to receiver stations by receiving a control signal, receiving a second control signal and transmitting the control signal to enable a unit of programming to be received at an output device.

A review of representative ones of the patented claims will demonstrate that the patented claims cover the invention claimed in this application:

a) In patent 4,694,490, claim 7 is representative of the claimed method for communicating TV program information to a receiver station. The receiver station receives the video data, displays it, detects the presence of overlay information using an instruct signal, and has computers generate and transmit this overlay info to the display.

b) In patent 4,704,725, claim 3 is representative, and, as summarized below, recites a method of communicating data comprising:

- a) multiple receivers, each with a computer,
- b) transmitting instruct to transmit signals to the computers,
- c) detecting the signals and coupling them to the selected computers,
- d) having the computers control their own selected output device.

c) In patent 4,965,825, claim 24 is representative, and, as summarized below, recites generating a computer output having the steps of:

a) having multiple receivers, each with a computer,
b) transmitting an instruct to generate signal to the computers,
c) causing the computers to generate individual user output information.

d) In patent 5,109,414, claim 15 is representative, and, as summarized below, recites a signal processing system (including):

a) receiver/distribution means,
b) switch means,
c) control signal detector means for transferring data to storage means,
d) storage means for storing and transferring data to processor means,
e) processor means for controlling.

While claim 15 is an apparatus claim, a method claim and apparatus claim do not in themselves establish groups that are "independent and distinct".

The patented claims are also primarily directed to methods or structure to control element(s) either directly at that station or at another remote station. This control is generally completed with the reception or recognition of an instruct signal. The same common concept exists in application claim 6. All of the claims, both patented and pending in this application, when considered together, effectively recite parts of the preferred embodiment, i.e. a head, intermediate, and subscriber station. The patented claims "cover" the claims of the application because the patented limitations do not exclude the limitations of this application.

In the arguments above, the examiner, when discussing several of the patents, stated that the patented claims were broad enough to read on multiple stations. While it is believed this analysis is correct, it is not critical to this rejection. Since the patented claims recite limitations that are interrelated with other similar features claimed in this application, it is the examiner's

position that those patented claims "cover" the application claims because all of these claimed features (both in the patent and application) describe what is effectively the preferred embodiment.

The claims in this application, if allowed without a terminal disclaimer, would continue patent protection of the preferred embodiment, i.e. the complete system of the head, intermediate, and subscriber stations, beyond the expiration of applicants' parent patents.

5. It is acknowledged that a multiplicity rejection was mailed on July 27, 1989 in parent file 07/096,096. In this rejection, the examiner had limited the applicants to 25 claims.

Schneller did not equate a multiplicity rejection with a restriction requirement as a permissible exception to being subject to the non-obvious non--statutory double patenting rejection. For that reason, this action will not overturn the legal reasoning in *Schneller* which supports the non-statutory non-obviousness double patenting rejection above.

It is believed, however, that applicants arguments on this multiplicity issue can be better supported if a nexus is established between the claims of this application and those that were canceled in 07/096,096 in response to the multiplicity requirement.

Notwithstanding the comment above, at the time the examiner made the multiplicity rejection, there was a body of case law that had overturned similar rejections. Note *In re Flint* 162 USPQ 228 (CCPA 1969) and *In re Wakefield*, 164 USPQ 636 (CCPA 1970).

6. A determination of a possible non-statutory double patenting rejection obvious-type in each of the related 327 applications over each other will be deferred until a later time. This action is taken if view of the possibility that many of these applications may be abandoned or merged.

7. Claims 3-34 are rejected under the judicially created doctrine of double patenting over the claims of copending U.S application 08/113,329 and the following related U.S applications (all of the application are series 08):

#	Ser. No.	#	Ser. No.	#	Ser. No.
1	397371	2	397582	3	397636
4	435757	5	435758	6	437044
7	437045	8	437629	9	437635
10	437791	11	437819	12	437864
13	437887	14	437937	15	438011
16	438206	17	438216	18	438659
19	439668	20	439670	21	440657
22	440837	23	441027	24	441033
25	441575	26	441577	27	441701
28	441749	29	441821	30	441880
31	441942	32	441996	33	442165
34	442327	35	442335	36	442369
37	442383	38	442505	39	442507
40	444643	41	444756	42	444757
43	444758	44	444781	45	444786
46	444787	47	444788	48	444887
49	445045	50	445054	51	445290
52	445294	53	445296	54	445328
55	446123	56	446124	57	446429
58	446430	59	446431	60	446432
61	446494	62	446553	63	446579
64	447380	65	447414	66	447415
67	447416	68	447446	69	447447
70	447448	71	447449	72	447496
73	447502	74	447529	75	447611
76	447621	77	447679	78	447711
79	447712	80	447724	81	447726
82	447826	83	447908	84	447938
85	447974	86	447977	87	448099
88	448116	89	448141	90	448143
91	448175	92	448251	93	448309

94	448326	95	448643	96	448644
97	448662	98	448667	99	448794
100	448810	101	448833	102	448915
103	448916	104	448917	105	448976
106	448977	107	448978	108	448979
109	449097	110	449110	111	449248
112	449263	113	449281	114	449291
115	449302	116	449351	117	449369
118	449411	119	449413	120	449523
121	449530	122	449531	123	449532
124	449652	125	449697	126	449702
127	449717	128	449718	129	449798
130	449800	131	449829	132	449867
133	449901	134	450680	135	451203
136	451377	137	451496	138	451746
139	452395	140	458566	141	458699
142	458760	143	459216	144	459217
145	459218	146	459506	147	459507
148	459521	149	459522	150	459788
151	460043	152	460081	153	460085
154	460120	155	460187	156	460240
157	460256	158	460274	159	460387
160	460394	161	460401	162	460556
163	460557	164	460591	165	460592
166	460634	167	460642	168	460668
169	460677	170	460711	171	460713
172	460743	173	460765	174	460766
175	460770	176	460793	177	460817
178	466887	179	466888	180	466890
181	466894	182	467045	183	467904
184	468044	185	468323	186	468324
187	468641	188	468736	189	468994

190	469056	191	469059	192	469078
193	469103	194	469106	195	469107
196	469108	197	469109	198	469355
199	469496	200	469517	201	469612
202	469623	203	469624	204	469626
205	470051	206	470052	207	470053
208	470054	209	470236	210	470447
211	470448	212	470476	213	470570
214	470571	215	471024	216	471191
217	471238	218	471239	219	471240
220	472066	221	472399	222	472462
223	472980	224	473213	225	473224
226	473484	227	473927	228	473996
229	473997	230	473998	231	473999
232	474119	233	474139	234	474145
235	474146	236	474147	237	474496
238	474674	239	474963	240	474964
241	475341	242	475342	243	477547
244	477564	245	477570	246	477660
247	477711	248	477712	249	477805
250	477955	251	478044	252	478107
253	478544	254	478633	255	478767
256	478794	257	478858	258	478864
259	478908	260	479042	261	479215
262	479216	263	479217	264	479374
265	479375	266	479414	267	479523
268	479524	269	479667	270	480059
271	480060	272	480383	273	480392
274	480740	275	481074	276	482573
277	482574	278	482857	279	483054
280	483169	281	483174	282	483269
283	483980	284	484275	285	484276

286	484858	287	484865	288	485282
289	485283	290	485507	291	485775
292	486258	293	486259	294	486265
295	486266	296	486297	297	487155
298	487397	299	487408	300	487410
301	487411	302	487428	303	487506
304	487516	305	487526	306	487536
307	487546	308	487556	309	487565
310	487649	311	487851	312	487895
313	487980	314	487981	315	487982
316	487984	317	488032	318	488058
319	488378	320	488383	321	488436
322	488438	323	488439	324	488619
325	488620	326	498002	327	511491
328	485,773				

The subject matter claimed in the instant application is fully disclosed in the referenced copending applications and would be covered by any patent granted on that copending applications since the referenced copending applications and the instant application are claiming common subject matter, as follows: a signal processing apparatus and method including an interactive communications system apparatus and method.

Furthermore, there is no apparent reason why applicant would be prevented from presenting claims corresponding to those of the instant application in the other copending applications. *In re Schneller*, 397 F.2d 350, 158 USPQ 210 (CCPA 1968). See also MPEP § 804.

A review of the claims in the related copending applications was made. These claims do not appear independent and distinct from the claims in this application. It is believed that CCPA in *Schneller* used the "independent and distinct" standard as the main factor in its determination that the double patenting rejection should be affirmed. The relevant arguments in the preceding paragraphs in support of this position are incorporated herein.

8. The non-statutory double patenting rejection, whether of the obvious-type or non-obvious-type, is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent. *In re Thorington,* 418 F.2d 528, 163 USPQ 644 (CCPA 1969); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); *In re Van Ornam*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); and *In re Goodman*, 29 USPQ2d 2010 (Fed. Cir. 1993).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321 (b) and (c) may be used to overcome an actual or provisional rejection based on a non-statutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.78 (d).

Effective January 1, 1994, a registered attorney or agent of record may sign a Terminal Disclaimer. A Terminal Disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

9. Claims 3-34 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicants regards as the invention.

The examiner must be able to determine the meets and bounds of the claims to perform an effective search and analysis over the art. The examiner is not certain that the meets and bounds of these claims can be determined because of the language in the disclosure and claims. For example, the disclosure teaches many transmitter and receiver stations, instruct signals, control signals, decoders, etc. (This is just a partial list of terms in applicants' disclosure that apply to plural elements in that disclosure.) When these phrases are claimed, the examiner needs to know "which" element in the disclosure is performing the claimed step. For example, when a hypothetical claim recites "transmitter station", and the disclosure teaches different ones (those in the origination, intermediate, and subscriber stations), the examiner needs to be able to envision what applicants could be claiming.

Applicants' assigned multiple meanings to words in a claim makes a claim indefinite.

Traditionally, examiners "diagram" claims to determine the meets and bounds. To explain what "diagraming" means, the examiner attempts to draw a picture (generally a circuit or a

connection of block elements in an electrical application) which represents what was claimed so that the examiner can visualize how a mythical reference could anticipate the claim, if the claim was given its broadest reading. If the claim recites terms or phrases that have multiple meanings in the disclosure, the examiner can't determine whether the diagram of the claim is correct. Given this, how can the examiner determine whether or not the scope of the art searched for is commiserate with the broadest reading of the claim?

Admittedly, the size of applicants' disclosure with its numerous possible implementations is contributing to the problem, but the problem does exist. Applicants are being requested to reference the claim limitations in this application to the disclosure so that the meets and bounds of these claims can be properly considered. This can be done in a remarks section, the claims do not have to be amended.

10. Claims 6 and 21 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 6, lines 10-11, "said at least one" is vague and indefinite because it is unclear whether it refers to "at least one" of line 9 or "at least one" of lines 1-2.

In claim 21, line 5, "said computer" is vague and indefinite because it is unclear whether it refers to "a computer" of line 1 of claim 21 or "a computer" of lines 2-3 of claim 6.

11. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.
>
> (e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

12. Claims 6, 7 and 22 are rejected under 35 U.S.C. 102(a) as being anticipated by Matsumoto et al. (U.S. Patent No. 4,245,245).

Matsumoto et al (Matsumoto) shows structure for performing the method claimed of delivery of a receiver specific program to at least one of a plurality of receiver stations. Each receiver station has a computer (processor 34) and an output device (TV 40).

With respect to claim 6 and looking at figure 3 the computer 9 in the central control unit receives an "end of transmission signal" which acts as the claimed second control signals in that it operates at the central station to communicate the claimed "first control signal". See col. 17, lines 54-col. 18, line 4. Among the control signals transmitted are addresses. The repeating transmission station II corresponds to the claimed "intermediate transmitter" since it receives the signals from the central control unit I and retransmits the signals to the terminal units ("receiver stations").

The control signal is transmitted by FSK modulation transmitter 16 ("one or more origination transmitters") and when received is effective to perform a number of function. Note col. 12, lines 5-9 wherein it is stated that when the address code transmitted coincides with that stored the entire terminal unit is caused to operate as well as control the upstream transmitter to transmit signals to the central control unit I with information as to the status of terminal unit III. The status of the terminal III includes the channel selected which is a receiver specific value stored in processor 34. A receiver specific signal representing this value is generated and transmitted and as per col. 12, lines 35-38 the electronic tunable converter is operated by way of the processor 34. In that the terminal is caused to operate upon receipt of the control signal, the functions of generating a specific value, generating a signal based on that value and communicating a unit of programming is seen to be in response to the transmission of the control signal.

Claim 7 differs from claim 6 only in the term "storing said control signals". If the control signal is considered to include the address, clearly that is stored in units 10 and 11 of the central station.

Regarding claim 22, Matsumoto et al. in col. 13, lines 1-20 disclose that a plurality of programs can be received.

13. Claims 7 and 34 are rejected under 35 U.S.C. 102(b) as being anticipated by Fletcher et al. (U.S. Patent No. 4,054,911).

Fletcher et al. (Fletcher) discloses a method of delivering a receiver specific program (e.g., the real time stock information, video data, etc.) at at least one of a plurality of receiver stations (Fig. 7). Each of the receiver station stations includes a microprocessor 310 ("computer"), and a CRT 330 or printer 316 ("an output device"). Fletcher in col. 5, lines 48-50 and lines 1-14 of the abstract discloses that the receiver station (Fig. 7) receives different operating or control program instructions ("control signal") from a remote data base ("a transmitter station"). This implies that the data base stores control program instructions ("storing control signal") and transmits ("transmitter station") the control program instruction to the receiver station ("causing said control signal to be communicated to a transmitter" for transmission to the receiver station Fig. 7). In order to store the control program instructions, they must be first received ("receiving control signal"). The discussion at col. 49, lines 28-55 indicates that the control programing instructions includes a control program for performing stock analysis. Based on the downloaded control program ("control signal effective at the receiver station"), the microprocessor 310 ("computer") compares the real time incoming last stock price with the "buy" or "sell" limits stored in the microprocessor 310 ("processing information stored in said computer"). If a specific value generated ("to generate a receiver specific value") from the comparison exceeds the preselected limit set by the user, a signal ("receiver specific signal") is provided to output information on the screen or CRT 330 for display ("communicate a unit of programming to said output device").

Regarding claim 34, Fletcher discloses that the instructions include operation instruction (col. 5, lines 48-49).

14. Claims 6 and 22 are rejected under 35 U.S.C. 102(e) as being anticipated by Cox et al (U.S. Patent No. 4,388,645).

Cox et al (Cox) in Fig. 1 illustrates a teletext communication system which includes a satellite transmitter 10 and at least one of a plurality of receiver stations (12, 20, 22, 24, 26 and 16). As evidenced by Fig. 1, the receiver station includes a microprocessor (col. 8, line 12) and a TV receiver 16. In practice, the satellite transmitter 10 receives signals from an earth station and retransmits the received signals to a plurality of receiver stations located in different regions. As disclosed in col. 3, lines 27-65 and col. 4, lines 41-44, the signals transmitted through the satellite transmitter 10 comprise programming and time codes.

Regarding claim 6, the claimed "computer" corresponds to the microprocessor (col. 8, line 12) and memories 38a-38c, and the claimed "output device" corresponds to the TV receiver 16. The claimed "one or more origination transmitters" is met by the earth station which inherently contains a transmitter for transmitting signals to the satellite transmitter 10, and the "first control signal" is met by the time codes shown in Fig. 3. In order to transmit signals from the earth station to the satellite transmitter 10 ("an intermediate transmitter"), the transmission must be initiated or caused by a activation or initiation signal (or any signal which causes the earth station to transmit signals to the satellite transmitter 10). Such signal can be considered as "a second

control signal". As disclosed in col. 8, lines 11-26 and col. 7, lines 11-44, upon receiving the time code (Fig. 3), the microprocessor (col. 8, line 12) compares ("effective to control the computer" since Webster's New World Dictionary, Third College Edition defines "control" as "to check or verify by comparison with a duplicate register or standard") the received time codes with the stored time codes Fig. 2 ("information stored in computer"). If the stored time code (Fig. 2) is less than or equal ("generate a specific value") to the received time code, a signal ("a specific signal") was provided to the gates (72, 76, 80) for enabling the memories to communicate the programming to the TV receiver 16 ("communicate a unit of programming to said output device").

Regarding claim 22, as evidenced by Fig. 4, the memories can store different programming in memories 381-38c.

15. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

16. Claims 3-5, 8-20 and 23-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fletcher et al. (U.S. Patent No. 4,054,911) in view of "Minicomputers in Security Dealing" by Gaines et al. (Hereinafter "Gaines").

Regarding claim 3, as discussed above, Fletcher et al (Fletcher) discloses a method of delivering a receiver specific program (e.g., real time stock information, video data, etc,) at a receiver station which comprises a microprocessor 310 ("computer") , and a CRT 330 or a printer 316 ("an output device"). As disclosed in col. 49, lines 28-55, the received information includes control program instructions ("one or more control signals") for performing stock analysis and the particular real time stock price or information ("one or more units of programming") . The selecting and transferring steps are met when the microprocessor 310 processes the real time stock information or price or when the stock information is outputted to the CRT 330. The claimed "one or more control signals" is met by the control program instruction for performing stock analysis. As discussed above, based on the downloaded control program ("control signals"), the microprocessor 310 ("computer") compares the real time incoming last stock price with the "buy" or "sell" limits stored in the microprocessor 310 ("processing information stored in said computer"). If a specific value generated ("to generate a receiver specific value") from the comparison exceeds the preselected limit set by the user, a signal ("receiver specific signal") is provided to output information on the screen or CRT 330 for display ("communicate a unit of programming to said output device").

Fletcher differs from claim 3 in that Fletcher does not specifically disclose the presentation of a specific program which includes two or more of units of programming, and the two or more unit of programming includes a communicated unit of programming and received and selected one or more unit of programming. However, Gaines same as Fletcher, teaches a receiver station (Fig.

1) which receives stock information. As evidenced by Figs. 3 and 4 of Gaines, the computer outputs the result of the comparison of two stocks information to the display device. As both Fletcher and Gaines disclose a receiver station for receiving stock information, it would have been obvious to incorporate the output method of Gaines to the unit of Fletcher in order to allow the user to easily visualize the result of comparison between different stocks. The combination of Fletcher and Gaines outputs two stocks information ("two or more units of programming") to the CRT 330. The communicated unit of programming corresponds to a particular stock information stored (e.g., one of the two output stock information) at the received station and the at least one of received and selected one or more unit of programming corresponds to the received and selected real time stock price or information (e.g., the other of the two output stock information).

Regarding claim 4, the interface 314 can be considered as "a selective transmission device" since it can connects the CRT 330 or the printer 315 for outputting data or signals.

Regarding claims 5 and 11, Fletcher in col. 49, lines 54-55 discloses storing stock information. The receiver station of Fletcher also includes memories 340, 332 and 304, etc. for storing data. Any stored data can be subsequently outputted.

Regarding claim 8, as disclosed in the abstract of Fletcher, different control programs ("a software module") can be downloaded.

Regarding claim 9, as discussed above, the combination of Fletcher and Gaines (e.g. Fig. 4) two unit of stock programming or information is outputted to the output device

simultaneously. The microprocessor 310 is operated based on the downloaded control instructions ("one or more control signals"). Fig. 4 Gaines clearly illustrates a complete image.

Regarding claim 10, Fletcher in col. 12, line 44 to col. 22 discloses assembling the captured program instructions ("one or more control signals"). As discussed above, the control program instructions for performing stock analysis are used to generate specific value. As disclosed in col. 12, the instructions are in machine language code. In addition, the microprocessor 310 inherently processes machine language codes.

Regarding claim 12, the receiver station of Fletcher includes a video monitor 330 and a printer 316.

Regarding claim 13, Fletcher in col. 49, lines 47-48 discloses that the unit receives inputs (e.g., the "buy" and "sell" stock limits) from the user.

Regarding claim 14, the list of stock information (e.g., Fig. 3 of Gaines) can be considered as "a schedule" since Webster's New World Dictionary, Third College Edition, defines "schedule" as "a list, catalog, or inventory of details". The specific value is generated based on the comparison of stock from a selected list of stock information.

Regarding claim 15, Figs. 1-3 of Fletcher illustrates that the code portion can have different lengths (expanded or contracted).

Regarding claim 16, microprocessor is operated based on the downloaded program. Fletcher discloses that a memory location can be cleared for storing some new data (col. 8, lines 40-43 and col. 10, lines 8-9 and col. 45, lines 35-36).

Regarding claim 17, the receiver station of Fletcher is capable of identifying programs and loading the identified program to the program memory 332 (col. 8, lines 45-52).

Regarding claims 18 and 19, Fletcher in col. 49, lines 1-10 further discloses interrupting the processor 310. The processor 310 outputs information to the CRT 330 or printer 316 (col. 49, lines 50-55). Fletcher also shows a controller 306, 510a or 340.

Regarding claim 20, the receiver station of Fletcher identifies the one or more control signals (col. 7, lines 30-43 and col. 8, lines 44-52). The downloaded page number is compared with the page number selected by a user to extract the control program instructions (col. 44, lines 34-048 and col. 6, lines 25-27).

Regarding claims 23 and 24, the discussion at col. 49, lines 45-55 indicates that the specific value is a financial value.

17. Claim 33 is rejected under 35 U.S.C. 103(a) as being unpatentable over Cox et al (U.S. Patent No. 4,388,645) in view of Zaboklicki (DE 2904981).

Cox et al (Cox) differs from claim 33 in that Cox does not disclose the downloading of the operating instructions. However, Zaboklicki from the same of endeavor, teaches a teletext system in which processing program or telesoftware is downloaded to the receiver station as operating instructions for receiving the programming or program segments (page 10, lines 16-18 and page 21, lines 18-20). As both Cox and Zaboklicki disclose a system for transmitting data in the vertical blanking interval of a TV signal, it would have been obvious to an artisan of ordinary skill

at the time of the invention to use the vertical blanking interval of Cox to transmit or download processing program or software as taught by Zaboklicki in order to allow the receiver station to implement different functions without any modification to the costly hardware.

18. Claims 21 and 25-32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cox et al (U.S. Patent No. 4,388,645) in view of "Project SCORE*" by Brown et al (hereinafter "Brown").

Regarding claim 21, as discloses above, Cox shows a satellite transmitter ("intermediate transmitter"). Cox does not explicitly show that the satellite transmitter 10 includes a computer which receives an instruct signal. However, as evidenced by Fig. 3 of Brown, providing a satellite station with a control unit for receiving instruction signals to control the operation of the satellite station is known prior to the filing date of the instant application. As disclosed in column 1 of page 626, based on the commands or instruct signals, the control unit of the satellite station controls the communication of the signals. As both Cox and Brown use satellite station for conveying programming, it would have been obvious to an artisan of ordinary skill at the time of the invention to incorporate the control unit of Brown to the satellite transmitter of Cox in order to allow the user or operator to control the communication of signals. Although Brown does not specifically disclose that the control unit is a computer, it is well recognized that control unit includes computers. Therefore, it would have been obvious to use a computer as a control unit in the combination of Cox and ~~Brwon~~ Brown to carry out such control functions.

Regarding claims 25 and 30-32, as discussed above, Cox discloses a satellite transmitter 10 ("an intermediate transmitter station") which receives time codes signals ("first control signals") from the earth station. The time codes signals (Fig. 3) are used at the receiver station (16, 20, 22, 24, 26) to control microprocessor and memories ("second computer") to generate a specific value by processing information stored in the memories 38a-38c, generate a receiver specific signal and communicate a unit of programming to a TV receiver 16 ("an output device") based on the receiver specific signal (col. 8, lines 11-26 and col. 7, lines 11-44). The claimed "second control signals" is met by the instruct signals or commands (col. 1 of page 626 of Brwon) of the combination of Cox and Brwon as discussed in claim 21 above. As disclosed in column 1 of page 626, based on the commands or instruct signals, the control unit of the satellite station controls the communication of the signals.

Regarding claims 26 and 27, the combination of Cox and Brown (col. 1 of page 626) discloses that the signals received at the satellite station can be received before (e.g., storing the signals at the recorder and reproducer unit and then in response to a command at later time to retransmit the stored signals") or after (e.g., storing the signals at the recorder and reproducer unit following a stored command) the one or more second control signals.

Regarding claims 28 and 29, Brown further teaches that a recorder and reproducer unit (Fig. 3) can be incorporated into the satellite transmitter station for storing the signals and delaying the communication of the signals. Column 1 of page 626 clearly indicates that the communication and the storing of the signals are controlled by the commands. Therefore, it

would have been obvious to provide the satellite transmitter station 10 of Cox with such recorder and reproducer unit as taught by Brown in order to allow an operator to remotely control the transmission of the time codes ("first control signal") via the satellite transmitter station 10 and to delay broadcasting or transmission of the signals for the purpose of compensating the time zone differences among different areas.

19. Applicant's arguments filed 11/1/96 have been fully considered but they are not persuasive.

Applicants argue that the statement "when the address code transmitted coincides with that stored the entire terminal unit is caused to operate and control the upstream transmitter to transmit signals..." cited in the Office action does not relate to the claim terminology "the control signal is effective to control computer". However, as shown in Fig. 5, the terminal unit includes the processor 34 ("computer"). When the transmitted address code ("control signal") matches with the stored, the **entire** terminal unit is caused to operate. When the **entire** terminal unit is caused to operate, the processor ("computer") is also caused to operate since the processor 34 is part of the terminal unit as evidenced by Fig. 5 . Consequently, the address code ("control signal") is effective to control the processor 34 ("computer"), and the cited statement "when the address..." does meet the claim language. In addition, Webster's New World Dictionary, Third College Edition defines "control" as "to check or verify by comparison with a duplicate register or standard". Matsumoto et al. in col. 11, line 67 to col. 12, lines 35, clearly state:

> "The terminal signal **processor 34 compares the codes** of the digital signals received by said downstream signal receiver 33 **with the** inherent **codes** previously allocated to each of the subscriber and **stored in the address register** section 35"(emphasis added).

Since during prosecution of an application, terms found in the claims are given the broadest reasonable interpretation , In re Pearson, 181 USPQ 641 (CCPA 1974), and since the transmitted address code is used by the processor 34 ("computer") to check or verify by comparison with the stored address in the address register 35, the address code ("control signal") of Matsumoto et al. is indeed effective to control the processor or computer 34.

Applicants argue that the Office action implies that the upstream transmitter 36 in Matsumoto et al. relates to the "computer" in claim 6 of the present application. However, page 9, lines 23 and 24 of the Office action mailed 5/2/96 clearly states "Each receiver station has a computer (processor 34)". Therefore, examiner considered the processor 34 of Matsumoto et al. as the claimed "computer", not the transmitter.

Applicants argue that the first control signal (address) is not effective to control a computer to generate a receiver specific value (status/channel selected) as claimed in the claim of the present application. However, Matsumoto et al. in col. 12, lines 9-16 state:

> "**The upstream signal**... represents, in this case, the conditions in the terminal unit III... **the upstream signal**

> that are **generated from** the above terminal signal **processor 34**... The conditions of the channel being received" (emphasis added) .

Consequently, Matsumoto et al. clearly disclose that the upstream signal which includes the selected channel ("a receiver specific value") is generated by the processor 34 ("computer"). Since the terminal unit III transmits the upstream signal to the central control unit I (col. 1, lines 12, lines 5-10) only when the transmitted address code ("first control signal") coincides with that stored, the address code ("first control signal") is effective to control the processor 34 ("computer") to generate status information which includes a selected channel value (e.g., if the selected channel is channel 2, then the value 2 is a receiver specific value). In addition, Matsumoto et al. in col. 12, lines 35-37 and 65-68 further state:

> "tuning fashion by way of the terminal signal processor 34" and "tuning ... to a desired channel... inform the terminal signal processor 34 of the status at the selected channel".

Therefore, the processor 34 ("computer") gathers the selected channel status information. In order for the selected channel ("a receiver specific value") to be transmitted by the transmitter, the selected channel status information must be first generated or produced by the processor 34 ("computer"). As discussed above, when two codes coincide, the terminal unit III transmits the status information which gathered by the processor 34. Thus, the processor 34 ("computer")

does generate or produce the selected channel status information ("a receiver specific value") to the transmitter for the transmission to the central control unit I based on the address code ("first control signal").

20. Applicants arguments against In re Schneller have been noted. This rejection will be maintained until resolved in parent application 08/113,329, where applicants have filed an appeal brief.

21. Applicant's arguments with respect to claims 3-34 have been considered but are moot in view of the new ground(s) of rejection.

22. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for response to this final action is set to expire THREE MONTHS from the date of this action. In the event a first response is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37

CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event will the statutory period for response expire later than SIX MONTHS from the date of this final action.

23. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Andrew Faile whose telephone number is (703) 305-4380.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 305-4700.

Andrew Faile

ANDREW FAILE
PRIMARY EXAMINER
GROUP 2600